

CLAIMS

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- 5 1. A rotating electric machine comprising a rotor, stator and windings, the windings being arranged in several layers and forming end windings outside the stator, characterized in that at least one of the windings comprise a flexible conductor surrounded by a solid insulation system comprising an inner layer with semiconducting properties, an insulating part and an outer layer with semiconducting properties and the at least one winding is arranged in such way that the end windings comprise layers crossing each other.
- 10 2. A rotating electric machine according to claim 1, characterized in that the layers are held in fixed positions at the end windings by positioning means, in order to prevent fretting contact between the layers at the location where the layers cross.
- 15 3. A rotating electric machine according to claim 2, characterized in that the positioning means comprise a resilient layer located in the contact area between two layers and a securing device, mutually securing the two layers, such that the resilient layer permit a certain relative movement between the layers due to skewing of the resilient material and not due to sliding in the contact area, the thickness of the resilient layer being chosen taking into consideration the permissible relative movement.
- 20 4. A rotating electric machine according to claim 3, characterized in that the resilient layer comprises a piece of slit rubber tubing clad around each layer in the contact area of the crossings.
- 25 5. A rotating electric machine according to claim 3 or 4, characterized in that the securing device comprises
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a bundling tape wrapped around two layers at the contact location.

5 ~~6~~. A rotating electric machine according to any one of claim 1-5, **characterized** in that the layers are held in fixed positions at outer attachment points in the stator.

10 ~~7~~. A rotating electric machine according to any one of claim 1-6, **characterized** in that the positioning means are made of materials with defined resistivity such that it can be insulating or electrically conductive.

15 ~~8~~. A rotating electric machine according to any one of the preceding claims, **characterized** in that the at least one winding comprises a cable.

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